AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An oxygen-delivery matrix, comprising, a biocompatible, single unit construct formed matrix, wherein the matrix is formed prior to gas production, comprising a swellable polymer network and oxygen in closed cells in the formed matrix, wherein the oxygen is provided by the one time reaction of a catalyst present in the formed matrix and a reactant solution contacting the catalyst to release oxygen in at least closed cells in the formed matrix.

2. (Original) The matrix of Claim 1, further comprising at least one active agent.

3. (Original) The matrix of Claim 1, wherein the biocompatible matrix comprises polyacrylamide.

4. (Previously Presented) The matrix of Claim 1, wherein the matrix further comprises a non-gellable polysaccharide.

5. (Canceled)

6. (Previously Presented) The matrix of Claim 37, wherein the generation of oxygen results from the decomposition of a peroxide.

7. (Canceled) The matrix of Claim 6, wherein the decomposition of the peroxide is caused by the catalyst.

8. (Previously Presented) The matrix of Claim 1, wherein the catalyst is a carbonate salt, a salt of iodide, manganese dioxide or cupric chloride, or an enzyme.

9-11. (Canceled)

12. (Previously Presented) The matrix of Claim 1, wherein the polymer network comprises a natural or synthetic polymer.

13-20. (Cancelled)

21. (Previously Presented) The matrix of Claim 2, wherein the active agent comprises gases, anti-microbial agents, anti-fungal agents, anti-bacterial agents, anti-viral agents, anti-parasitic agents, mycoplasma treatments, growth factors, proteins, nucleic acids, angiogenic factors, anesthetics, mucopolysaccharides, metals, pharmaceuticals, chemotherapeutic agents, herbicides, growth inhibitors, anti-fungal agents, anti-bacterial agents, anti-viral agents and anti-parasitic agents, wound healing agents, growth promoters, indicators of change in the environment, enzymes, nutrients, vitamins, minerals, carbohydrates, fats, fatty acids, nucleosides, nucleotides, amino acids, sera, antibodies and fragments thereof, lectins, immune stimulants, immune suppressors, coagulation factors, neurochemicals, cellular receptors, antigens, adjuvants or radioactive materials.

22. (Previously Presented) The matrix of Claim 21, wherein the gases comprise nitrogen, carbon dioxide, and noble gases.

23. (Previously Presented) The matrix of Claim 21, wherein the antimicrobial agent comprises isoniazid, ethambutol, pyrazinamide, streptomycin, clofazimine, rifabutin, fluoroquinolones, ofloxacin, sparfloxacin, rifampin, azithromycin, clarithromycin, dapsone, tetracycline, erythromycin, ciprofloxacin, doxycycline, ampicillin, amphotericin B, ketoconazole, fluconazole, pyrimethamine, sulfadiazine, clindamycin, lincomycin, pentamidine, atovaquone, paromomycin, diclazaril, acyclovir, trifluorouridine, foscarnet, penicillin, gentamicin, ganciclovir, iatroconazole, miconazole, Zn-pyrithione, silver salts, chloride, bromide, iodide or periodate.

24. (Previously Presented) The matrix of Claim 21, wherein the growth factor agents comprise basic fibroblast growth factor, acidic fibroblast growth factor, nerve growth factor, epidermal growth factor, insulin-like growth factors 1 and 2, platelet derived growth factor, tumor angiogenesis factor,

vascular endothelial growth factor, corticotropin releasing factor, transforming growth factors α and ß, interleukin-8, granulocyte-macrophage colony stimulating factor, interleukins, or interferons.

25. (Previously Presented) The matrix of Claim 21, wherein the mucopolysaccharides comprise heparin, heparin sulfate, heparinoids, dermatitin sulfate, pentosan polysulfate, chondroitin sulfate, hyaluronic acid, cellulose, agarose, chitin, dextran, carrageenan, linoleic acid, or allantoin.

26. (Previously Presented) The matrix of Claim 21, wherein the proteins comprise collagen, cross-linked collagen, fibronectin, laminin, elastin, or cross-linked elastin.

27. (Previously Presented) The matrix of Claim 21, wherein the metals comprise zinc or silver.

28. (Previously Presented) The matrix of Claim 1, wherein the matrix comprises a stranded configuration.

29. (Previously Presented) The matrix of Claim 27, wherein the polymer network comprises a natural or synthetic polymer.

30. (Previously Presented) The matrix of Claim 2, wherein the polymer network comprises collagen, gelatin, chondritin, calmodulin, cellulose, agar, agarose, animal hide, hyaluronic acid, dextran, alginate, polylysine, resorbable polymers, polyacrylamide, polymethacrylate, polyacrylate, polybuterate, polyurethane foam, polyether, silastic, silicone elastomer, rubber, nylon, vinyl or cross-linked dextran.

31. (Previously Presented) The matrix of Claim 1, further comprising a water loss control agent comprising petrolatum, glycolipids, ceramides, free fatty acids, cholesterol, triglycerides, sterylesters, cholesteryl sulfate, linoleic ethyl ester or silicone oil.

32. (Previously Presented) The matrix of Claim 1, further comprising a plasticizer comprising glycerol, water, propylene glycol or butanol.

33. (Previously Presented) The matrix of Claim 1, further comprising a hydration control agent comprising isopropyl alcohol, ethanol, glycerol, butanol, or propylene glycol.

34. (Previously Presented) The matrix of Claim 4, wherein the non-gellable polysaccharide is guar gum.

35. (Previously Presented) The matrix of Claim 8, wherein the enzyme is catalase.

36. (Previously Presented) The matrix of Claim 1, wherein the polymer network comprises collagen, gelatin, chondritin, calmodulin, cellulose, agar, agarose, animal hide, hyaluronic acid, dextran, alginate, polylysine, resorbable polymers, polyacrylamide, polymethacrylate, polyacrylate, polybuterate, polyurethane foam, polyether, silastic, silicone elastomer, rubber, nylon, vinyl or cross-linked dextran.

37. (Previously Presented) The oxygen delivery matrix of Claim 1, comprising the biocompatible, single unit construct formed matrix and oxygen gas incorporated therein after contacting the formed matrix with the reactant solution.

38. (Currently Amended) A gas delivery device, comprising a biocompatible, single unit construct of a formed matrix, wherein the matrix is formed prior to gas incorporation, comprising a swellable polymer network and a gas in closed cells formed in the matrix, wherein the gas is the results of ~~s~~ a single reaction of a catalyst present in the formed matrix and a reactant solution contacting the formed matrix.

39. (Currently Amended) A gas delivery device, comprising a biocompatible, single unit construct of a formed matrix, wherein the matrix is formed prior to gas incorporation, comprising a swellable polymer network and a catalyst that produces a gas in closed cells formed in the matrix when contacted by a reactant solution.